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Revision of *Systellogaster*

(Diptera: Leptogastridae)

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While studying at the Zoologische Sammlung des Bayerischen Staates, München, I found that Hermann had misidentified two of his three species in the rare South American genus *Systellogaster* Hermann. These misidentified specimens from Peru and Paraguay, are described here as two new species; a third from Brazil is also described. Types are in the Zoologische Sammlung des Bayerischen Staates.

I appreciate the courtesy of Dr. Friedrich Kuhlhorn's loan of specimens for rechecking my original observations.

Systellogaster Hermann

Systellogaster Hermann, 1926: 149. Type-species, *Euscelidia fascipennis* Schiner, 1867: 359 (orig. des.). Leptogastrinae, Asilidae.

Systellogaster; Hull, 1962: 309. Leptogastrinae, Asilidae.

Systellogaster; Martin, 1968: 6. Leptogastridae. Citation of Hermann, 1914, lapsus.

Past authors have assigned *Systellogaster* Hermann to Leptogastrinae, Asilidae. Martin (1968) assigned the genus to the family Leptogastridae. It has these leptogaster characteristics: no pulvilli; abdomen short and stout in comparison with most Leptogastridae, yet, as with Leptogastridae, is attached at an angle to the thorax; segment 2 is longer than segment 3, and the abdomen is about the diameter of some species of *Ammophilomima* Enderlein (Leptogastridae); most Leptogastridae have either a fenestra or a narrow band of change in the texture of sternite 2 at $\frac{1}{3}$ to $\frac{1}{2}$ the distance from the base, some with sternite 2 totally smooth, including *Systellogaster*; epandria with a V-shaped notch near base with a short lateral slit.

Generic characters: Abdomen slightly shorter or longer than wings; anteriorly tergites 3—5 with polished bands; scutellum usually with long bristles on disc and always on posterior margin; face with four mystax bristles; antennal segment 3 equal to 1.5 times, and style twice, as long as segments 1+2; wings with maculae; moderately long pile on gradually clavate hind femora, empodium half as long as tarsal claws; length 7—14 mm.

Key to the Species of *Systellogaster*

1. Reddish species; antennae yellow; thorax reddish, yellowish brown tomentose, geminate median stripe brown tomentose; hind femora

- yellow, laterally dense yellow hairs, bare ventrally; length 10 mm. (Peru) (female) *silacea* Martin*)
- Black, or black and red species; median stripe not geminate; hind femora not bare of pile ventrally 2
2. Face brassy yellow above, white below; antennae reddish yellow brown; thorax brown tomentose, narrow darker tomentose median stripe extending on polished posterior declivity; length 11 mm. (Amazon, Brazil) (female) *calceolata* (Bigot)
- Face totally white, gray, or brown tomentose, or a combination of gray and brown 3
3. Thorax, ground color black, densely gray tomentose; abdomen reddish to yellowish brown, tergites 3—6 with narrow white bands on posterior margin; antennae black; length 8 mm. (Pará, Brazil) (sex unknown) *breviventris* (Rondani)
- Thorax, ground-color red with black longitudinal stripes 4
4. Hind femora white-haired laterally and ventrally 6
- Hind femora black-, brown-, or orange-yellow-haired laterally and ventrally; less densely brown- or black-haired dorsally 5
5. Male: femora black-haired; face white; tergite 2 yellow posteriorly, tergite 3 yellow anteriorly and posteriorly, tergite 4 yellow anteriorly; tergites 3-5 narrowly white pollinose on posterior margin; length 12 mm. (s. Brazil) *fascipennis* (Schiner)
- Female: femora orange-yellow-, brown-, or black-haired laterally and ventrally; face mostly brown, narrowly gray laterally and below mystax; tergites 3-5 white pollinose on posterior margins; length 10-14 mm. (s. Brazil) *fascipennis* (Schiner)
6. Face white tomentose; thorax, anteriorly and lateral to median stripe, white tomentose; occiput brownish gray tomentose, the amount of gray varies with the view; length 14 mm. (s. Brazil) (male) *alba* Martin*
- Face brown tomentose, gray below antennae and narrowly above and below mystax; thorax anteriorly and lateral to median stripe, yellowish brown tomentose; occiput brown tomentose; length 7 mm. (Paraguay) (female) *parva* Martin*

Systellogaster alba Martin, new species

Systellogaster alba Martin differs from other species in the genus, except *S. parva* Martin, in having the hind femora laterally and ventrally moderately densely white-haired, dorsally less densely brown-haired.

Male: Length 11 mm. Head black; face white tomentose, front brown tomentose, occiput brownish tomentose with some gray; mystax, four white bristles; occipital bristles weak, yellowish; antennae reddish brown, segment 1 polished, segment 3 about 1.5 times and brown style about twice as long as segments 1+2.

Thorax dark red; grayish white tomentose, yellowish brown between lateral and median stripes, median stripe dark brown, extending on posterior declivity, lateral stripes dark brown beginning behind anterior humeri and extending beyond median stripe on posterior declivity, short yellowish hair sparse; scutellum brown, brown tomentose, numerous brown hair-like bristles on disc and posterior margin; pleura dark red, thinly gray tomentose.

Abdomen black, tergites 3—5 anteriorly with polished bands, tergites 2—5 brown tomentose anteriorly, posteriorly broad grayish bands; male genitalia reddish brown, apex of hypandrium white.

Wings dark brown around and above anterior crossvein to wing margin, apex of wing dark brown, lighter brown in anal area.

* new species

Legs reddish brown; empodia about half as long as tarsal claws.

Female: Unknown.

Type material: Holotype, male, Nova Teutonia, Brazil, October, 1967. Paratypes: seven males, same data as holotype, 27-30 September, 1967: two males, same data as holotype, 1 October, 1968; 15 December 1969.

***Systellogaster breviventris* (Rondani)**

Gonypes breviventris Rondani, 1846: 96. Type-locality: Rio Negro (Belém, Pará), Brazil.

No specimens examined. Original description: antennae black; face white tomentose; thorax blackish, pleura, metathorax, and scutellum dark gray pollinose; tergites 3-6 with white bands on posterior margins; posterior legs black, hind tibia narrowly whitish basally, hind femora darkened white basally and apically; length 8 mm. Sex unknown.

***Systellogaster calceolata* (Bigot)**

Lasiocnemus calceolata Bigot, 1878: 430. Type, Hope Museum, Oxford, Type-locality: Brazil, Amazon.

Redescription of type-Specimen: Length 11 mm., not 8 mm. as Bigot stated. Face brassy yellow above, white below, small bare red spot medially on oral margin; occiput gray tomentose, yellowish brown on upper occiput and around collar; antennae reddish-yellow brown.

Anterior fifth of thorax dark cherry red, posterior four-fifths black, densely brown pollinose; patch of long reddish brown hair above wing base; pleura reddish black except below wing base polished reddish yellow.

Abdomen dark cherry red, incisures 2-4 yellow, brown tomentose. Wings light yellowish brown, darker spot across submarginal and costal cell, posterior longitudinal vein 4 (M_2) not angulate.

Legs dark cherry red; hind femora dorsally, erect short brownish hair, ventrally a patch of short brown hair medially and posteriorly.

The type-specimen is a female, not a male as Bigot stated.

***Systellogaster fascipennis* (Schiner)**

Euscelidia fascipennis Schiner, 1867: 358. Type, male, Naturhistorisches Museum, Vienna. Type-locality: "Brazil". Distribution: Brazil: Santa Catarina: Nova Teutonia; Corpa. São Paulo: Baueri; São Paulo. Rio Grande do Sul.

At hand are 13 females and one male from southern Brazil which are assigned to *Systellogaster fascipennis* (Schiner). The sexes are dimorphic in the color of the tomentum. The male with a white tomentose face, has the hind femora covered with hair reddish brown in some lights and black in others, apicoventrally is a small patch of yellowish hair. A single female with similar hair on the hind femora, has a brown tomentose face, narrowly gray laterally and below mystax. Twelve females with a similar face, have hind femora with orange-yellow hair ventrally and reddish brown dorsally; in less intense light the hair appears brownish. The face of some specimens is more grayish than in others.

Tergite 3 of males and females with ground color brown, yellowish red on posterior and anterior margins, tergite 2 with a similar band posteriorly and tergite 4 anteriorly; tergites 2-5 with narrow white

pollinose bands on posterior margins; one female has a white pollinose spot dorsomedially on tergite 6, some specimens without pollinose bands on tergite 5.

Systellogaster parva Martin, new species

Systellogaster parva Martin from Paraguay, is 7 mm. in length. *Systellogaster breviventris* (Rondani) from northern Brazil, is 8 mm. long. The thorax of *S. breviventris* is black, while that of *S. parva* is red with three black stripes. *S. parva* was misidentified by Hermann as *S. calceolata* Bigot.

Female: Length 7 mm. Head black; face brown tomentose, gray below antennae, above and below mystax, very narrowly gray laterally, front and occiput brown tomentose; antennal segments 1 and 3 dark reddish brown, segment 2 paler reddish brown, segment 3 yellowish brown pollinose, style dark reddish brown, nearly twice as long as segment 3; mystax of 4 pale bristles; disc of occiput with scattered pale brownish hair-like bristles, no bristles on upper occiput.

Thorax red, median black stripe, lateral black spots; brown pollinose, posterior humeri and above humeri whitish pollinose; posterior declivity with semirecumbent, upturned brownish hair-like bristles; scutellum red, yellowish brown pollinose, numerous weak brown bristles on posterior margin, a few on disc; pleura red, whitish pollinose above, light yellowish brown pollinose below.

Abdomen dark red, tergite 2 anteriorly yellowish brown tomentose, denser patches of pollen laterally, posteriorly thinly dark brown pollinose, posterior margin gray pollinose band; tergite 3, 4, and 5 more reddish than tergite 2, sparsely yellowish brown pollinose, posterior margins gray pollinose, tergites 6-7 similar to tergite 5, without a gray band.

Wings fuscous, dark brown costal cell, from discal crossvein to fork of longitudinal veins 2 and 3 a darker fuscous, posterior longitudinal vein 4 angulate, posterior longitudinal vein 5 sessile.

Hind legs reddish brown, hind femora ventrally with rather dense white hair, dorsally brown hair.

Male: Unknown.

Type material: Holotype, female, Fichburg, San Bernardino, Paraguay; a second label, Sammlung F. Hermann; hand-written third label, *Systellogaster calceolata* Bigot. I have added a holotype label, *Systellogaster parva* Martin.

Systellogaster silacea Martin, new species

Systellogaster aurantiaca Hermann, 1926: 151. **Nomen nudum.**

Hermann (1926) gave this Peruvian species the name *S. aurantiaca*, he put a type label on the pin, but did not publish the description in literature. The species is described here as *S. silacea* Martin, new species.

Female: Reddish species. Length 10 mm. Face dark reddish, occiput black; face brownish yellow tomentose, at some angles of view a yellowish brown triangle narrowly outlined by yellow; front brownish yellow tomentose, behind ocellar tubercle on upper occiput darkened brown tomentum, disc yellowish gray brown tomentose; antennae yellow, segment 3 about 1.5 times longer than segments 1+2, style twice as long as segments 1+2, brown; four long yellow mystax bristles, occipital bristles weak, long, yellow, more dense below.

Thorax reddish; brownish yellow tomentose, median stripe geminate, brown tomentose, a narrow lighter brown stripe subdividing, brown tomentose lateral stripes short, ending on posterior declivity; thorax covered with sparse yellowish short hair, longer, more dense on posterior declivity; scutellum same color as dorsum of thorax, long yellowish hair on disc and posterior margin; pleura same color as dorsum, brown spot between coxa 2 and 3.

Abdomen reddish, whitish yellow tomentose, more densely medially, anteriorly tergites 3-5 with polished transparent bands; vestiture yellow, sparse, longer laterally on tergites 2-3; tergite 8 reddish, polished.

Wings hyaline; posterior vein 4 (M_2) not angulate.

Hind femora yellow, sparse yellowish red erect hair dorsally, lateroventrally a row of dense long reddish yellow hairs, bare ventrally, tibia yellowish on basal half, reddish apically.

Type material: Holotype, female, Pichis, Peru, I 1904 (Pta. Yessup); second label, hand-written, *Systellogaster aurantiaca* Hermann, "typus" in red ink. I have put on the pin the holotype label *Systellogaster silacea* Martin.

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